

# PATENT COOPERATION TREATY

From the  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:

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## PCT

### WRITTEN OPINION

(PCT Rule 66)

Date of mailing (day/month/year) 27 February 2006 (27.02.2006)	
Applicant's or agent's file reference 227	<b>REPLY DUE</b> <div style="text-align: right; font-size: small;">within 1 months/days from the above date of mailing</div>
International application No. PCT/KR 2004/002590	International filing date (day/month/year) 11 October 2004 (11.10.2004)
Priority date (day/month/year) 10 October 2003 (10.10.2003)	
International Patent Classification (IPC) or both national classification and IPC IPC <sup>8</sup> : A61K 31/56 (2006.01)	
Applicant SK CHEMICALS CO. LTD.	

1. This written opinion is the first (first, etc.) drawn by this International Preliminary Examining Authority.
2. This opinion contains indications relating to the following items:
  - I. ☒ Basis of the opinion
  - II. ☒ Priority
  - III. ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
  - IV. ☐ Lack of unity of invention
  - V. ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability, citations and explanations supporting such statement
  - VI. ☐ Certain documents cited
  - VII. ☐ Certain defects in the international application
  - VIII. ☐ Certain observations on the international application
3. The applicant is hereby invited to reply to this opinion.
 

**When?** See the time limit indicated above. The applicant may, before the expiration of that time limit, request this Authority to grant an extension, see Rule 66.2(d).

**How?** By submitting a written reply, accompanied, where appropriate, by amendments, according to Rule 66.3. For the form and the language of the amendments, see Rules 66.8 and 66.9.

**Also** For an additional opportunity to submit amendments, see Rule 66.4.  
For the examiner's obligation to consider amendments and/or arguments, see Rule 66.4bis.  
For an informal communication with the examiner, see Rule 66.6.

If no reply is filed, the international preliminary examination report will be established on the basis of this opinion.
4. The final date by which the international preliminary examination report must be established according to Rule 69.2 is: 10.02.2006.

Name and mailing address of the IPEA/AT Austrian Patent Office Dresdner Straße 87, A-1200 Vienna	Authorized officer  <div style="text-align: center; font-weight: bold;">KRENN M.</div>
Facsimile No. 1/53424/200	Telephone No. 1/53424/435

Form PCT/IPEA/408 (cover sheet) (July 1998)

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**I. Basis of the opinion**

1. With regard to the elements of the international application:\*
- ☒ the international application as originally filed
- ☐ the description:
- pages , as originally filed
- pages , filed with the demand
- pages , filed with the letter of
- ☐ the claims:
- pages , as originally filed
- pages , as amended (together with any statement) under Article 19
- pages , filed with the demand
- pages , filed with the letter of
- ☐ the drawings:
- pages , as originally filed
- pages , filed with the demand
- pages , filed with the letter of
- ☐ the sequence listing part of the description:
- pages , as originally filed
- pages , filed with the demand
- pages , filed with the letter of
2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.
- These elements were available or furnished to this Authority in the following language \_\_\_\_\_ which is:
- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).
3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the written opinion was drawn on the basis of the sequence listing:
- ☐ contained in the international application in printed form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.
4. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/fig
5. ☐ This opinion has been drawn as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as „originally filed“.

**WRITTEN OPINION**

International application No.  
PCT/KR 2004/002590

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<b>V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</b>			
I. Statement			
Novelty (N)	Claims ____		YES
	Claims 1-5		NO
Inventive step (IS)	Claims ____		YES
	Claims 1-5		NO
Industrial applicability (IA)	Claims 1-5		YES
	Claims ____		NO
Citations and explanations			
<p>D1: CHUNG et al., "Inhibitory effect of ursolic acid purified from <i>Origanum mayorana</i> L. on the acetylcholinesterase.", <i>Molecules and Cells</i>, 30 Apr. 2001, Vol. 11(2), pp. 137-143</p> <p>D2: HEO et al., "Ursolic acid of <i>Origanum majorana</i> L. reduces Abeta-induced ixudative injury", <i>Molecules and Cells</i>, 20 Feb. 2002, Vol. 13(1), pp. 5-11</p> <p>D3: KR 2003-0042123 A (KOREA RESEARCH INSTITUTE OF BIOSCIENCE AND BIOTECHNOLOGY) 28 May 2003</p> <p>D4: SHIN et al., "Ursolic acid protects hippocampal neurons against kainite-induced excitotoxicity in rats.", <i>Neuroscience Letters</i>, 20 May 2004, Vol. 362(2), pp.136-140</p> <p>D5: KITANI et al., "Pharmacological modifications of endogenous antioxidant enzymes with special reference to the effects of deprenyl: a possible antioxidant strategy", <i>Mechanisms of Ageing and Development</i>, Nov. 1999, Vol. 111(2-3), pp. 211-221</p> <p>D6: US 6607758 B2</p> <p>D7: US 2002/0042535 A1</p> <p>The subject matter of claims 1-5 (= first medical use claims) is anticipated by D1, D2 and D4 which refer to the use of ursolic acid (= one of the presently claimed compounds) in medicine.</p> <p>The relevance of D3 is not understood, because it refers to the use of tiarellic acid, which structurally differs from the compounds presently claimed.</p> <p>Furthermore, the classification of D5 as "A"-document is not comprehensible, because it discusses the pharmacological activity of ursodeoxycholic acid resp. ursolic acid; the latter is claimed in the present application.</p> <p>D6 discloses a method of inhibiting amyloid formation consisting in the administration of a therapeutically effective amount of plant matter from a plant of the genus <i>Uncaria</i>.</p> <p>D7 refers to a steroid compound, which can be used for the treatment of cancer, neurodegenerative diseases, etc..</p> <p>Consequently, in respect to D1, D2, D4 and D5 claims 1-5 are neither new nor inventive.</p> <p>Industrial applicability is given.</p>			